



**UNITED STATES DEPARTMENT OF COMMERCE**  
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AS

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/169,127 12/20/93 SHINOHARA

H 0756945

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IM52/0810

EXAMINER

PADGETT, M

ART UNIT

PAPER NUMBER

1762

51

DATE MAILED: 08/10/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

08/169,127

Applicant(s)

Shinohara et al

Examiner

M.L. Padgett

Group Art Unit

1762

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- ☒ Responsive to communication(s) From Board on 2/23/01
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-4, 6-9, 11-14 + 16 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-4, 6-9, 11-14 + 16 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

## Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some\* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 28
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

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1. The examiner notes that there was another after appeal information disclose (paper #28), submitted on 9/17/96 (stamped 9/19/96), that was never returned to or remanded to the examiner for consideration, and does not appear to have been reviewed. This IDS was submitted before the revisions to 1.97(d) made effective on 9/23/96, and those to (d) and (e) effective on 12/1/97. While the examiner does not have a record of which set of revisions define the requirements for applicant's IDS submission, but paper #28 contains a statement in accordance with 1.97 (e) (2), a petition and petition file which is presumably what was required at that time, so paper #28 will be considered at this time, and made of record.

2. It is further noted, that there is (was) a preliminary amendment attached to the back of the petition of 3/11/94 (3/17/94 stamped) that was never noted or entered, however the amendment to page 5, line 13 would not have been entered because "Figs. (A) to 3(D)" was not present to correct, as applicant appears to have omitted a "3".

3. In response to the remand from the board,

A. The typographical error, that omitted "and 16" from the art rejection is noted, and reinstated in the rejection. As claim 16 had always previously been rejected, with no changes in the content of the rejection, as seen in the final rejection, this creates no new issues.

B. The issue of Yamazaki et al having the same Assignee was brought to the examiner's attention years after the writing of the Examiner's Answer during an interview on a child case, and had never been mentioned by the applicants either when adding priority documents after final, nor during or before their priority discussions, nor in any subsequent arguments, hence any

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decision on double patenting (DP) or judicial DP, would not have been made before the Examiner's Answer, since there are no overlapping inventors and there was no indicated basis therefore. As noted by the board, for this application, the real party of interest is "Semiconductor Energy Laboratory Co., Ltd" recorded March 14, 1994, which is also the assignee listed on the Yamazaki patent.

C. First the issues of priority for the claims as written, must be clarified. Is there support for the claims in the original U.S. case 07/097,190 now P.N. 4,861,964 (that has two interviewing CIP's), and in its certified Japanese priority documents?

As was clearly indicated in the advisory action of 11/22/95 (paper #20), while the certified translation of the priority document 61-229,252 (filing date 9/26/86) had support for applicant's proposed after final amendment, of 11/7/95 it did not and does not have support for the language of the claims as presently written, as they were treated during the prosecution of this case. In their after final communications, applicant's proposed intended meanings for the claims, which differed from that which had been under discussion in the rejections, and have treated the Appeal as if that intended meaning was necessarily there. It would seem to the examiner, that the main issue is not so much the priority date/documents, but claim language interpretation, since whether or not the certified translation's date is effective hinges on what the claims actually say. In the case of either interpretation or priority date, it appears that Judicial double patenting and resolving the question of inventorship are necessary. The claims of the more recently filed (after the appeal) continuing applications also need to be considered in view of (Judicial) double patenting. S.N.

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09/208,751 (P.N. 6,261,856) was unavailable as either a patent printout or application file, but was retrieved for review before mailing (see section 13)

D. The claim language and that of the body of the specification are the same, and the interpretation given there to by the examiner has been consistent for the entire history of these claims, and that interpretation was not disputed by applicants until after final, hence it would appear that there has also been confusion as to the intended meaning from applicant's representatives, or the like, so a minimum conclusion is that the language is confusing as written. Since the certified translation juxtaposed to the present application and the interpretation newly presented after final would suggest an alternate meaning, it would be fair to say that the claims as written are ambiguous, hence applicant's after final/appeal arguments suggest the need for a 112 rejection in order to advance prosecution.

Using claim 1 as an example, the initial claim language interpretation of lines 3-4, (the appendix) "expanding said laser beam in a first direction" considered "first direction" to be modifying the laser beam. Hence, analogously in lines 8-9 "condensing said masked laser beam in second direction orthogonal to said first direction", would then mean that when the act of condensing is preformed, the laser beam must be or have been redirected in a direction orthogonal, ie. bent at a right angle, to the first direction. This interpretation is entirely consistent with the claim and specification language, as is seen by the rejection (repeated below), reads on a procedure common in the laser art (secondary references), hence would have been a reasonable

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interpretation for any one of ordinary skill to make, especially as it does not require one to read features into the claims that are not mentioned in the claim limitations.

Applicant's apparent intended meaning, as determined from their Brief and proposed amendment of 11/7/95, is that the "first direction" should be modifying the expanding, or with respect to the beam, its cross-section, while the second direction modifies the condensing action, or the cross-section of the expanded beam. Note that even given this intended meaning, expanding in one direction does not exclude expansion simultaneously in another direction also. Likewise for condensing.

As noted previously, page 4 of the certified translation supports the apparent intended meaning, as it clearly discusses expanding the width of the initial light, as well as having the laser light "condensed to be a slit shape in either one of X or Y directions...", hence clearly referring to directions associated with the laser beam's cross-section. However, no support for the initial interpretation of the claims is seen in the certified translation, therefore if the claims are considered to read on that initially applied meaning, they can not be given the benefit of the 61-229,252 priority document, as it does not teach the laser beam having a first direction, then a second direction orthogonal, ie. perpendicular, to the first. The Boards suggestion that applicant's would be willing to point out such support does not seem reasonable, in light of applicant's argued intended meanings.

The options would appear to be, to let the board impose one of the two meanings, or declare the claims ambiguous, or would be for applicants to eliminate the ambiguity from the

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claims and specification language, so that what appears to be applicant's intended meaning is unambiguously clear throughout claims and disclosure. Support to do the latter can be cited from the priority documents, which then would clearly provide the case with the 9/26/86 effective filing date. In either case, the issues of Judaical double patenting also need to be dealt with.

4. Claims 1-4, 6-9, 11-14 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As discussed above (section 3D), and made evident by the record (after final arguments for an alternate interpretation), the claims as written are ambiguous, particularly to as whether the first and second directions should modify the laser beam (initial interpretation), or should modify the expanding or condensing actions that might effect the cross-section of the laser beam. This rejection is only made in response to evidence (certified translations) and arguments made after final, and to hopefully advance the prosecution.

5. Claims 1-4, 6-9, 11-14 and 16 are directed to an invention not patentably distinct from claims 1-15 of commonly assigned Yamazaki et al, U.S. P.N. 4,786,358. Specifically, the assignment as indicated by p.3 of the Brief was made on 3/14/94 (and the grandparent with like assignment was issued on 8/29/89), while the Yamazaki et al patent issued on 11/22/88, hence there is a gap in the dates, and it is not clear that the inventions were commonly owned at their conception. Clarification of this is needed.

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Commonly assigned Yamazaki et, P.N. 4,786,358, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee is required under 37 CFR 1.78© and 35 U.S.C. 132 to either show that the conflicting inventions were commonly owned at the time the invention in this application was made or to name the prior inventor of the conflicting subject matter. Failure to comply with this requirement will result in a holding of abandonment of the application.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground



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provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4, 6-9, 11-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al (358) alone, or in view of Yamazaki et al (855), and Toshiba KK or NEC Corp((131) or (123)) or Traskos et al or Hongo et al or Krimmel et al.

Note, this rejection only applies for the initial interpretation of the claims with the first direction and the second direction orthogonal to the first, applied to the direction of the laser beam, and not to the laser beam's cross-section (applicant's after final interpretation) which is never mentioned in the claims with respect to the directions. If applicant's intended meaning as illustrated by their 11/7/95 proposal is considered to be in the claims (or is put there), Yamazaki et al (358) is no longer prior art, and the Yamazaki et al (855) reference showing use of an orthogonally directed (bent) laser beam, becomes irrelevant.

Yamazaki et al (358) teach forming a pattern on a coated substrate (ie. treating an object) via irradiation with an excimer laser beam shaped through a mask which removes portions to shape the beam and pattern (abstract). It is disclosed that excimer laser beams generally emit a

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beam with a rectangular cross-section (col. 2, lines 40-41). The beam is first treated by an expander "in one direction," contracted by a convex cylindrical lenses made of artificial quartz and shaped by a mask (fig. 1 and col. 2, lines 30-45). The mask is used to remove edge portions of the expanded rectangular beam which already would make a rectangular or linear beam spot. As shown in fig. 2, all edges or the edges on the longitudinal side of the beam spot are removed, so that the beam spot is narrowed after shaping, hence linear (col. 2, lines 55-60; col. 3, lines 8-47 and fig. 2, and claims 5 and 8). Note that Yamazaki et al (358) only teach the use of a convex cylindrical lenses (ref. No. 4, col 2, lines 38-40), and that such lenses will preferentially contract, ie. condense, the laser light in one direction as claimed. As was commented on in the advisory, "transverse" adds no additional meaning to the claims.

Figure 1 shows the mask after the converging lens, but discussion on the use of the mask refers only to treating the expanded beam without regard to the converging lens on col. 3, and variations are discussed on col. 5, lines 4-20, concern alternative orders where for laser/lense/mask/substrate one may instead use laser/mask/lense/substrate, ie. place the mask between the laser and the cylindrical lense. It was further noted that Yamazaki et al (358)'s claim 15 has a shaping step before the contracting step, but there are obvious logic errors in the logic (sequence) of this claim as lines 5 and 8 are identical, and the shaping of line 5 can only logically be applied to the expanded laser beam, as the contracting step comes after it , but read in light of the taught alternative placements in the specification, reading line 5 as expanded laser beam would appear appropriate. Hence, Yamazaki et al (358) implies applicant's placement of the mask with

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respect to the converging lens, but never explicitly claims it. Given the teaching on placing the mask in the expanded beam, it would have been obvious to place it before the converging lens, especially given the alternative teaching in col. 5, and because such shaping as is standardly done with a collimator, where the outer edges which may be significantly less in intensity are removed and the beam is shaped to give a clearly defined spot or more uniform intensity.

Alternately, the references of Toshiba KK (Fig. 3), NEC Corp((131) or (123)) or Traskos et al or Krimmel et al (the US patent has the German patent as a priority document) all show the use of a mask or collimator before a converging lens. Note that the shape of the lens shown in the figures has characteristic shape, hence convex or converging need not be stated if the figure is appropriate. Note lens shape in Toshiba KK, NEC Corp. (131-uses pulsed beam and a slit to shape the beam before the converging lens as shown in Figs. 1, 2 and 3, described in abstract and p. 9; 123-Fig. 3 shows slit then converging lens with beam shape and abstract includes semiconductor as substrates), and Hongo et al (Fig. 1-has beam shape and controlled slit and turns a corner).

The references of Krimmel et al and Traskos et al show more complex patterning. Traskos et al, fig. 1, shows the mask before the converging lens and discusses use of masks as shown, or on the other side of the lens (on substrate) in col. 2, lines 56-66. Krimmel et al in figs. 1 and 3 shows a mask before a convex shaped lens, either before or after directing the beam in an orthogonal direction from its first or initial direction. Discussion of Fig. 1 beam path can be found

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on col. 4, lines 47-65, and lines 65-68 state that further description of beam path details are not required because they are sufficiently known to those skilled in the art of optical imaging.

From any one of the teachings of masks or slits it would have been obvious to one of ordinary skill in the art, to use Yamazaki et al (358)'s mask before the converging lens, because it is shown to be a well known and standard technique, especially since it is also alternatively discussed in (358).

Yamazaki et al (358) also teach a movable table (25) which can be used to cause scanning as claimed with respect to the impingement direction (col. 3, lines 3-7 and claims 6 and 9).

Yamazaki et al (358) does not teach directing the condensed beam in a direction orthogonal (perpendicular) to the original or first beam direction. Furthermore, while there is NO actual patterning required by appellant's claims, it is well known to pattern in almost any category of treatments, as exemplified by the integrated circuit and semiconductor device arts, and the particular pattern effected (beam spot shape) is a matter of design choice.

As for turning the beam perpendicular, such as may be done with mirrors (reflectors), this is a conventional procedures which may be motivated by reasons such as chamber, window and substrate geometry. Proper mirror placement can cause orthogonal orientation without changing the beam shape, hence is considered an obvious variation of Yamazaki et al (358's) linear (direct beam path) arrangement.

Alternately, Yamazaki et al (855) is cited for showing both the orthogonal orientation for the converging beam (s) and laser patterning of either a conductive (col. 5, line 7-col. 6, line 9) or

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semiconductive layer (col. 6, line 33-col. 7, line 10). It would have been obvious to apply these techniques of (855) to (358), because the same conductor layers are taught to be treated for the same purpose, ie. patterning, esp. making lines (abstract; col. 3, lines 28-39), the same type of beams are used (excimer-col. 4, line 64-col. 5, line 5) and the same diverging then converging sequence (Fig. 5; col. 5, lines 9-23), making the teachings analogous.

8. Claims 1-4, 6-9, 11-14 and 16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 & 5-15 of U.S. Patent No. 4,786,358 in view of Yamazaki et al (855), and Toshiba KK or NEC Corp (131 or 123) or Traskos et al or Hongo et al or Krimmel et al, as applied above.

This rejection applies for the initial interpretation of the claims, where Yamazaki et al (855) supplies the teachings for directing the laser beam orthogonally. Alternately, for applicants' apparent intended meaning the following rejection would apply.

Claims 1-4, 6-9, 11-14 and 16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 & 5-15 of U.S. Patent No. 4,786,358 in view of Toshiba KK or NEC Corp (131 or 123) or Traskos et al or Hongo et al or Krimmel et al, as applied above.

This set of references applies for where the directions are applied to the expanding and condensing limitations, and the discussion in section 7 above particularly concerning Yamazaki et al (358)'s claim 15 is especially significant, with the secondary references supplying further motivation for relative placement of the mask and lense. It is further noted, that while these

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claims do not specifically limit the direction of the expanding and/or contracting, that the claims must be read in light of the specification, where it is noted that the only means taught for contracting, ie. condensing is convex cylindrical lenses (4), which inherently contracts the light preferentially in one direction. Likewise the only taught expander (2) is said to function in one direction as illustrated in Fig. 2 (B). Therefore, one of ordinary skill in the art, reading Yamazaki et al (358)'s claims concerning linear cross-sections, elongated portions, slits, etc., would have expected to use the means as provided by the specification to produce, which only includes the expanding in one direction and using a convex cylindrical lenses. Also, while the claims require expansion in a first direction, they do not exclude expansion in other directions also at the same time. Likewise, while condensing in a second orthogonal direction is required to take place, condensing in other directions at the same time is not prohibited.

For either option the remaining main difference is in the present claims is the specification of pulsed or excimer lasers, however since such lasers are conventional for use in laser patterning processes of all sorts, it would have been obvious to one of ordinary skill to perform the process with standard laser equipment which includes excimer lasers. Alternately, this position is substantiated by NEC Corp (123) (embodiment, p. 7 of translation ArF laser); or NEC Corp (131) (abstract: pulsed beam; p.3, line 16-17, KrF excimer laser); Traskos et al (claims -excimer lasers), or Krimmel et al (col. 8, Ex.1, excimer laser), who all teach excimer lasers, which are a type of pulsed laser, for use in patterning techniques with masks and condensing lenses.

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9. Claims 1, 3-4, 6, 8-9, 11, 13-14 and 16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mikio Hongou (or Hongo et al in the translation), JP 57-94482.

In the abstract of Hongo (57-94482) and Fig. 6, there is taught the use of beam expander (16) to expand the width of a laser beam, redirecting the beam orthogonally at mirror (3), then use of cylindrical lenses 17 and 18 to further shape the beam (consistent with the claims' comprising language), followed by use of masks 4 with its rectangular slit. Then before impinging on the substrate, objective lenses 5 is used to condense the beam as can be seen in Fig. 6 and 7, in a direction that narrows the shape made by the slit in the mask. Figure 8, illustrates the expansion of the beam, showing the increase in direction orthogonal to that narrowed by the mask and lens 5. The abstract also indicate use of an X-Y table to cause scanning of the work. The beam expander is further discussed on page 2 of the translation (claim 2); line 2 of page 4 indicates the use of a pulsed laser, and lines 4-8 that the rectangular beam emerging from the slit is condensed by lens 5; and Fig. 1 that these features are conventional, as is the X-Y table. As noted on p. 5 (bottom), Hongou's objective is to minimize waste of radiation, and to this end adds the beam expander and shaping as on page 6+, before passing through the mask's slit. Page 9 lists excimer laser as a possible laser source.

Note that Hongou (Hongo et al) 57-94482 reads on both interpretations of the claims, the initial or the one apparently intended by applicant. As the reference was submitted after the Examiner's answer, it is appropriate to apply it and make the rejection final.

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10. Claims 2, 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hongou (Hongo et al) 57-94482.

Hongo et al (57-94482) does not discuss the material that any of their lenses are made of, however notice is taken that quartz material, especially synthetic, ie.  $\text{SiO}_2$ , is a conventional lens material, hence would have been obvious to use for the taught lenses for its known effectiveness for that purpose and because choice of lense material would have been at least partly based on the particular wavelengths of light to be used in the process, such that the lense should not absorb the light.

11. Claims 1-4, 6-9, 11-14 and 16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 5-15 of U.S. Patent No. 4,786,358 in view of Hongo et al (57-94482). As discussed and applied above, all aspects in question in the (358) reference are seen to be supplied, or further detailed by Hongo et al (57-94482).

12. Claims 1-4, 6-9, 11-14, and 16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-44 of U.S. Patent No. 6,149,988. Although the conflicting claims are not identical, they are not patentably distinct from each other because the child case (988) differs mainly by clearly limiting the process to that represented by applicant's apparent applicant's intended meaning, and by elaborating on the relative movement/scanning of the laser with respect to the object, in present claims 11 and 16. It would have been obvious to one of ordinary skill in the art, to choose to move the substrate when



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scanning as claimed, because notice is taken that X-Y tables for such movement are conventionally used for providing movement of substrates when laser patterning, hence would have been expected to be effective for their standard purpose.

Other minor variations in the (988) claims include: (1) specifying use of a cylindrical convex lens, which inherently provides focusing/condensing that reads on the apparently claim configuration; (2) detailing specific features of excimer lasers, ie. KrF at 248 nm and 5.0 eV band gap; (3) claiming directing the shaped laser beam at a silicon oxide film for unspecified treatment. These variations would have been obvious since the lasers and lenses equipment specified are all subsets of what would have been expected to be used in the present claims procedures, with the particular laser parameters having no special significance for the generic treatment of an unspecified material. The treatment of Si oxide films, would have been obvious, because notice is taken that such dielectrics are standardly used in integrated circuit devices, where use of laser directed patterning for etching, deposition or various morphology modification are old and well known, hence obvious types of application for the claimed process due to their known uses.

13. The examiner further notes that there exists another child case, 09/208,751, which is issuing as patent US 6,261,856 B1 on 7/17/01. This case has the same title as the (988) patent, but review of the claims show that while the essential features of the present claims are in all the independent claims of (856 B1), they also include producing specific features of an electro-optical device, as well as laser induced crystallization of a semiconductor film.

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14. Claims 1-4, 6-9, 11-14 and 16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. RE 33,947 (P.N. 4,865,686). Although the conflicting claims are not identical, they are not patentably distinct from each other because the RE 33,947 claims contain limitations of the present claims in different orders and/or with alternate meanings, but appear to be intended to cover the same concepts. Specifically use of a mask in the present claims, rather than generic eliminating of a boarder [of laser light] would have been obvious as masks are standardly used for the claimed purpose. The obviousness of specific details of an excimer laser is again applicable, and RE 33,947 dependant claims 3 and 6, differ by specifying a particular enduse, essentially etching or milling, but such a use was old and well known in the art, and the shape produced is an effect of the beam spot..

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication should be directed to M.L.Padgett at telephone number (703) 308-2336 on M-F from about 8 a.m.-4:30 p.m, and FAX # (703) 305-3599 (official, after final), or 305-6078 (unofficial).

M.L.Padgett/th

August 6, 2001

August 9, 2001

A handwritten signature in black ink, appearing to read 'Marianne Padgett', with a long horizontal flourish extending to the right.

MARIANNE PADGETT  
PRIMARY EXAMINER  
GROUP 1700